Schena, Cristeen

From: Melcher, John
Sent: Thursday, August 21, 2014 12:00 PM
To: Tom Sgroi
Subject: RE: Regulator 012 Response to EPA Phone Questions

Categories: Record Saved - Shared

OK. Thanks again, Tom!
Jack

From: Tom Sgroi [mailto:TSgroi@gnhwpca.com]
Sent: Thursday, August 21, 2014 11:24 AM
To: Melcher, John
Subject: RE: Regulator 012 Response to EPA Phone Questions

Jack,

Yes, by looking at the two years of data we have come to the conclusion that there was not a CSO occurring for that extended period of time and it is likely due to poor meter placement and/or an unreliable meter.

As stated below we think the best approach now is to utilize a downstream meter within the interceptor and use the weir formula as the water surface exceeds the weir height of the twin barrels. Ideally we would love to install a meter in the 54" downstream; however, the invert is at (-2.59ft) NAVD88 and is tidally influence (mean high tide is elevation 2.8ft.) We have found it to be very difficult to meter in tidal backwater conditions because the meters measure depth and velocity. The tidal backwater skews the velocity component of the equation.

Regarding the 36"RCP...this location is locally separated so there are no cross connections of pipes.

Best Regards,
Tom

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From: Melcher, John [mailto:Melcher.John@epa.gov]
Sent: Thursday, August 21, 2014 10:30 AM
To: Tom Sgroi
Subject: RE: Regulator 012 Response to EPA Phone Questions

Thanks Tom.

I understand from our phone conversation that you folks think that CSO 012 wasn't actually discharging from March 1 – 7, 2013. Is that right?

Do you think that you can get an accurate idea of discharges from CSO Reg 012 from FM-15? There are a couple of sewer connections between the regulator and the meter… I can't tell if the drains show in the plan you sent tie in too or if they flow east through the 36" RCP… Couldn't you also install an additional meter in the nice, straight pipe downstream of the regulator in the 54" RCP?

In any case, thanks again for the info.

Jack

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From: Tom Sgroi [mailto:TSgroi@gnhwpca.com]
Sent: Wednesday, August 20, 2014 1:43 PM
To: Melcher, John
Cc: Gary Zrelak; Gabe Varca; Sidney J. Holbrook; George.Hicks@ct.gov
Subject: Regulator 012 Response to EPA Phone Questions

Hi Jack,

This email is in follow-up to your questions during our phone discussion the other day regarding CSO 012.

We have attached a site plan that shows the locations of flow meters OF-012A, OF-012B and Flow Meter -15 (FM-15), Regulator 012 and CSO Outfall 012. We have also attached a detailed sketch of Regulator 012.

Flow meters OF-012A and OF-012B were installed by CSL Services in each of the two 18 inch overflow pipes at Regulator 012 on October 15, 2012. At that time, the overflow depth in the 35 inch wide by 52 inch high brick sewer was 30 inches. Flow meter data between October 2012 and February 2013 seemed reasonable. CSOs occurred at Regulator 012 during significant rain events and ended within an hour after the rain stopped. Anomalies in the data showed up during March 2013. The normal CSO response to rain events was followed by extended periods of continued overflows consisting of minimal depths (sometimes less than 1-inch) and minimal velocities (sometimes less than 1 foot per second). Further, the data from flow meter OF-012A did not agree with the data from meter OF-012B. Many times during March 2013 meter OF-012A was showing an overflow and meter OF-012B was not (even though the overflow pipes are at the same elevation).

Although we had some concerns as to the validity of the data from March 2013, we did report the total overflow volumes to DEEP in our Annual Progress Report dated June 28, 2013. We also decided to raise the two pipe inverts at Regulator 012 by 6 inches. This work was completed on May 3, 2013. Flow metering data from meters OF-012A and OF-

012B returned to a reasonable pattern (CSOs occurring at Regulator 012 during significant rain events and ending within an hour after the rain stops).

As part of our ongoing Hydraulic Model Upgrade project, CH2MHill hired CSL Services to install flow meter FM-15 (three manholes downstream from Regulator 012) from May 7, 2014 to July 6, 2014. We were able to use the data from this meter to verify the reliability of the data from meters OF-012A and OF-012B. Meter location FM-15 is a more suitable location to collect reliable data to measure the CSOs at Regulator 012. Moving forward, we have instructed CSL Services to install a permanent flow meter at FM-15 and remove flow meters OF-012A and OF-012B.

As you can see the flow metering technology is very good; however, it does take a significant amount of time to gain a full understanding of how some of these regulators operate. In the cast of O-12, after 2-years we are just finally getting comfortable with the information we are obtaining.

If you should have additional question please feel free to call.

Best Regards,
Tom

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